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ABSTRACT

This report offers an evaluation of the Hawaii Chapter 1 Program for school years 1985-86 and 1986-87. The reading and mathematics programs served 14,158 students in 1985-86 and 14,280 in 1986-87. Data regarding reading indicated that mean normal curve equivalent (NCE) gains greater than zero were found in all districts and grade levels for both school years. Elementary school students (grades 1-6) tended to have greater reading achievement gains than secondary school students (grades 7-12). Statewide mean NCE reading achievement gain scores for 1985-86 and 1986-87 were 8.6 and 8.4, respectively. A total of 74 percent of students had NCE gain scores greater than zero in the 1985-86 school year, and 73 percent had such gains in the 1986-87 year. A greater proportion of elementary school students than of secondary school students made positive NCE gains for the 2-year period. Regarding statewide mathematics, the mean NCE gains were 8.2 in 1985-86 and 10.6 in 1986-87. Elementary students tended to have greater achievement gains than secondary students. For the 1985-86 and 1986-87 school years, 71 percent and 79 percent of Chapter 1 mathematics students had NCE gains greater than zero. Except for Windward school district, a greater proportion of elementary school (grades 2-6) students than of secondary school students made positive NCE gains for the 2-year period. It is concluded that Hawaii's Chapter 1 Program has had a positive impact on students. (RH)

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Hawaii Chapter 1 Program Evaluation

School Years 1985-86 and 1986-87

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FOREWORD

Under Chapter 1 of the Education Consolidation and Improvement Act of 1981, the Hawaii Chapter 1 Program is designed to help educationally deprived children from low-income areas improve their reading and mathematics skills.

This report is an evaluation of the Hawaii Chapter 1 Program for school years 1985-86 and 1986-87. It includes information about program implementation activities and Chapter 1 impact on student achievement in reading and mathematics.

The information contained in this evaluation report can be used by Chapter 1 administrators and instructional staff in planning for program improvement.

This report satisfies a federal requirement for Chapter 1 evaluation.

Charles T. Toguchi

Charles T. Toguchi
Superintendent of Education

TABLE OF CONTENTS

		Page No.
	Executive Summary	i
1.0	Context Information	1
	1.1 Purposes of Evaluation	1
	1.2 Program Goal and Objectives	1
	1.3 Program Implementation	2
2.0	Description of Evaluation	16
	2.1 General Approach	16
	2.2 Evaluation Design	16
3.0	Impact of Chapter 1 on Student Achievement	19
	3.1 Impact on Reading Achievement	19
	3.2 Impact on Achievement in Mathematics	26
	3.3 Conclusions	26
4.0	Program Improvement Effort	33
5.0	Recommendations	38

TABLES

		Page No.
Table 1	Number and Type of Chapter 1 Projects Implemented by School District in 1985-86 and 1986-87 School Years	3
Table 2	Number of Students Enrolled in Chapter 1 READING Projects By Elementary/Secondary and Public/ Non-Public Designation, 1985-86 and 1986-87	4
Table 3	Number of Students Enrolled in Chapter 1 MATHEMATICS Projects by Elementary/Secondary and Public/Non-Public Designation, 1985-86 and 1986-87	5
Table 4	Distribution of Project Setting by Districts in READING, 1985-86, 1986-87	8
Table 5	Distribution of Project Setting by Districts in MATHEMATICS, 1985-86, 1986-87	9
Table 6	Student Services Summary By School District for READING Projects, 1985-86 and 1986-87 School Years	11
Table 7	Student Services Summary By School District for MATHEMATICS Projects, 1985-86 and 1986-87 School Years	12
Table 8	Number of Staff Employed in Chapter 1 Projects During the Regular School Term in 1985-86 and 1986-87	14
Table 9	Chapter 1 Program Expenditures for the 1985-86 and 1986-87 School Years	15
Table 10	Statewide Chapter 1 Performance in READING, SY 1985-86	20
Table 11	Statewide Chapter 1 Performance in READING, SY 1986-87	21
Table 12	Chapter 1 READING Performance Gains Distribution, SY 1985-86	24
Table 13	Chapter 1 READING Performance Gains Distribution, SY 1986-87	25
Table 14	Statewide Chapter 1 Performance in MATHEMATICS, SY 1985-86	27

		Page No.
Table 15	Statewide Chapter 1 Performance in MATHEMATICS, SY 1986-87	28
Table 16	Chapter 1 MATHEMATICS Performance Gains Distribution, SY 1985-86	31
Table 17	Chapter 1 MATHEMATICS Performance Gains Distribution, SY 1986-87	32

FIGURES

Figure 1	State Reading Gains, SY 1985-86	22
Figure 2	State Reading Gains, SY 1986-87	23
Figure 3	State Math Gains, SY 1985-86	29
Figure 4	State Math Gains, SY 1986-87	30

APPENDICES

Appendix 1	Number of Students Enrolled in Chapter 1 Reading Projects By Grade Level and Public/Non-Public Designation, 1985-86	39
Appendix 2	Number of Students Enrolled in Chapter 1 Mathematics Projects By Grade Level and Public/ Non-Public Designation, 1985-86	40
Appendix 3	Number of Students Enrolled in Chapter 1 Reading Projects By Grade Level and Public/Non-Public Designation, 1986-87	41
Appendix 4	Number of Students Enrolled in Chapter 1 Mathematics Projects By Grade Level and Public/ Non-Public Designation, 1986-87	42
Appendix 5	Chapter 1 Project Level Information Form, School Year 1986-87	43

Executive Summary

This report provides the evaluation results of the Hawaii Chapter 1 Program for school years 1985-86 and 1986-87.

The purposes of the evaluation are as follows:

a. to satisfy a federal evaluation requirement,
b. to determine the extent of program impact on students,
c. to provide information to Chapter 1 administrators for program improvement, and
d. to provide information to Chapter 1 instructional staff so they will be able to identify students in need of additional help.

Under Chapter 1 of the Education Consolidation and Improvement Act of 1981 (formerly Title I), the Hawaii Chapter 1 Program is designed to help educationally deprived children from low-income areas improve their reading and mathematics skills.

The Chapter 1 reading and mathematics programs, serving students from public and non-public schools, served 14,158 students in 1985-86 school year and 14,280 students in 1986-87 school year. Over 99% of the Chapter 1 students were from public schools.

The norm-referenced evaluation model -- Model A -- was used to collect data to determine the impact of the Chapter 1 Program. The impact is measured by the extent to which students demonstrate Normal Curve Equivalent (NCE) gains. An average NCE gain score greater than zero is evidence of impact.

Chapter 1 impact on student achievement in reading and mathematics is summarized.

1. Reading

   a. Mean NCE gains greater than zero were found across all districts and grade levels for the 1985-86 and 1986-87 school years.

   b. Elementary school students (grades 1-6) tended to have greater reading achievement gains than secondary school students (grades 7-12).

   c. Statewide mean NCE reading achievement gain scores for the 1985-86 and 1986-87 school years were 8.6 and 8.4, respectively.

d. Statewide, 74% and 73% of the students had NCE gain scores greater than zero in the 1985-86 and 1986-87 school years, respectively.

e. A greater proportion of elementary school (grades 1-6) students made positive NCE gains than secondary school (grades 7-12) students for the two-year period.

2. Mathematics

a. Statewide, the mean NCE gains were 8.2 in 1985-86 and 10.6 in 1986-87. In addition, elementary students tended to have greater achievement gains than secondary students.

b. For the 1985-86 and 1986-87 school years, 71% and 79% of the students in Chapter 1 mathematics had NCE gains greater than zero, respectively.

c. Except for Windward school district, a greater proportion of elementary school (grades 2-6) students made positive NCE gains than secondary school (grades 7-12) students for the two-year period.

The evaluation findings suggest that Hawaii's Chapter 1 Program has had a positive impact on students.

The Chapter 1 Evaluation Technical Assistance Center (TAC) of the Northwest Regional Educational Laboratory (NWREL) has helped in Hawaii's improvement efforts through workshops and consultations. Each district has made commendable strides in improving the quality of projects. Four Chapter 1 projects were cited by the United States Office of Education Secretary's Initiative Program as unusually successful Chapter 1 projects. They are as follows:

1. Project READ, Aiea Elementary School, Central Oahu District
2. Reading, Kailua Elementary School, Windward Oahu District
3. Kapaa Elementary School Chapter 1 Reading Project, Kapaa Elementary School, Kauai School District
4. Comprehensive Language Improvement Project (CLIP), Kalakaua Intermediate School, Honolulu District

Other program improvement efforts are as follows:

1. School projects throughout the state have set higher student performance expectations.

2. Teachers and principals have worked together in developing Chapter 1 school-determined action plans.

3. Maui District personnel conducted a routine evaluation of Maui's Chapter 1 program. The evaluation addressed key questions about program and student performance.

To improve the Chapter 1 Program, the following recommendations are presented:

1. Have Chapter 1 staff (statewide) establish an objective to mainstream students with specific criteria and standards for mainstreaming.

2. In line with the concept of multiple objectives, commit the Hawaii Chapter 1 Program to do better than national Chapter 1 performance.

3. The evaluation of the Chapter 1 Program should be improved. The evaluation can be improved by determining how former Chapter 1 students are performing in the "mainstream." Data collection procedures on mainstreamed students should be established so that data can be routinely collected.

Hawaii Chapter 1 Program Evaluation

School Years 1985-86 and 1986-87

1.0 Context Information

1.1 Purposes of Evaluation

Major reasons for evaluating the Chapter 1 Program are as follows:

a. To satisfy federal regulations requiring that the Chapter 1 Program be evaluated at least once in three years;

b. To determine the extent of program impact on Chapter 1 students;

c. To provide information to Chapter 1 administrators so they will be able to identify areas in which program activities may need to be improved;

d. To provide information to Chapter 1 instructional staff so they will be able to identify students who may need additional help.

This report provides the results of program implementation activities and program impact on student performances for 1985-86 and 1986-87 school years.

1.2 Program Goal and Objectives

Chapter 1 of the Education Consolidation and Improvement Act (ECIA) of 1981 (formerly Title I of the Elementary and Secondary Education Act of 1965, P.L. 89-10) is a federally funded supplementary program to help educationally deprived children in low-income areas to improve their basic skills. In this context, the goal and objectives of the Hawaii Chapter 1 Program are as follows:

1.2.1 Goal

To help educationally deprived children from low-income areas who are in the Chapter 1 Program improve their basic skills in reading and mathematics.

1.2.2 Objectives

a. At the end of the project year, students participating in the Chapter 1 Reading Program will show improved reading comprehension skills above the expected performance without Chapter 1 as measured by the reading comprehension subtest of the Metropolitan Achievement Test, California Achievement Test, or Stanford Achievement Test.

b. At the end of the project year, students participating in the Chapter 1 Mathematics Program will show improved mathematics skills above the expected performance without Chapter 1 as measured by the Metropolitan Achievement Test or the California Achievement Test.

1.3 Program Implementation

1.3.1 Project Schools

Table 1 reports the number and type of Chapter 1 projects implemented in 1985-86 and 1986-87 school years. In the 1985-86 school year, there were 126 Chapter 1 reading and mathematics projects at 100 schools. Of the 126 projects, 100 were reading projects and 26 were mathematics projects. In the 1986-87 school year, there was a total of 130 reading (97) and mathematics (33) projects at 97 schools.

As in the past, the Chapter 1 Program has focused on reading and mathematics skills. A greater emphasis has been placed on reading than mathematics, resulting in the greater number of reading projects operating in the 1985-86 and 1986-87 school years. Only three districts operated Chapter 1 mathematics programs. They are Leeward, Windward, and Maui school districts.

1.3.2 Enrollment

Chapter 1 enrollments in reading and mathematics programs are reported in Tables 2 and 3, respectively. Of the 11,904 students

TABLE 1

Number and Type of Chapter 1 Projects Implemented by School District in 1985-86 and 1986-87 School Years[1]

School District	Number of Schools with Chapter 1 Projects[2]		Number and Type of Projects					
			Reading		Mathematics		Total Projects[3]	
	1986	1987	1986	1987	1986	1987	1986	1987
Honolulu	21	20	21	20	--	--	21	20
Central	15	14	15	14	--	--	15	14
Leeward	14	14	14	14	9	8	23	22
Windward	15	15	15	15	13	14	28	29
Hawaii	15	15	15	15	--	--	15	15
Maui	12	11	12	11	4	11	16	22
Kauai	8	8	8	8	--	--	8	8
TOTAL All Districts	100	97	100	97	26	33	126	130

[1] Information was obtained from the Project Level Information Form (PLIF) which has been administered to project schools annually.
[2] Private affiliate schools are counted as separate projects.
[3] A project here is a Chapter 1 reading or mathematics installation at a given school.

TABLE 2

Number of Students Enrolled in Chapter 1 READING Projects
By Elementary/Secondary and Public/Non-Public Designation
1985-86 and 1986-87[1]

District	Elementary		Secondary		Sub-Total		TOTAL	
	1986	1987	1986	1987	1986	1987	1986	1987
HONOLULU								
Public	1,232	1,400	2,278	1,750	3,510	3,150	3,525	3,157
Non-Public	5	4	10	3	15	7		
CENTRAL								
Public	891	1,087	253	353	1,144	1,440	1,154	1,440
Non-Public	7	--	3	--	10	--		
LEEWARD								
Public	1,903	1,951	1,262	1,228	3,165	3,179	3,165	3,179
Non-Public	--	--	--	--	--	--		
WINDWARD								
Public	869	944	764	715	1,633	1,659	1,648	1,674
Non-Public	6	14	--	1	6	15		
HAWAII								
Public	1,098	1,149	186	200	1,284	1,349	1,284	1,377
Non-Public	--	28	--	--	--	28		
MAUI								
Public	638	536	135	70	773	606	773	606
Non-Public	--	--	--	--	--	--		
KAUAI								
Public	353	355	--	--	353	355	364	366
Non-Public	11	11	--	--	11	11		
TOTALS								
Public	6,984	7,422	4,878	4,316	11,862	11,738	11,862	11,738
Non-Public	29	57	22	4	42	61	42	61
GRAND TOTAL	7,013	7,479	4,900	4,320	11,904	11,799	11,904	11,799

[1]Information was obtained from the Project Level Information Form (PLIF) administered to project schools annually.

TABLE 3

Number of Students Enrolled in Chapter 1 MATHEMATICS Projects
By Elementary/Secondary and Public/Non-Public Designation
1985-86 and 1986-87[1]

District	Elementary		Secondary		Sub-Total		TOTAL	
	1986	1987	1986	1987	1986	1987	1986	1987
LEEWARD								
Public	1,234	1,083	409	--	1,643	1,083	1,643	1,083
Non-Public	--	--	--	--	--	--		
WINDWARD								
Public	393	665	89	219	482	884	488	891
Non-Public	6	7	--	--	6	7		
MAUI								
Public	63	452	60	55	123	507	123	507
Non-Public	--	--	--	--	--	--		
TOTALS								
Public	1,690	2,200	558	274	2,248	2,474	2,248	2,474
Non-Public	6	7	--	--	6	7	6	7
GRAND TOTAL	1,696	2,207	558	274	2,254	2,481	2,254	2,481

[1] Information was obtained from the Project Level Information Form (PLIF) which has been administered to project schools annually.

in the 1985-86 school year reading projects, 11,862 (or 99.6%) were public school students and 42 (or 0.4%) were non-public school students. Of the 11,799 students in the 1986-87 school year reading projects, 11,738 (or 99.5%) were public school students and 61 (or 0.5%) were non-public school students. Although the number of students participating in the Chapter 1 reading projects differed from year to year, the proportion of student enrollment between public and non-public schools was about the same.

More than one-half of the students in the Chapter 1 reading projects were elementary school students. The Honolulu school district was the only district that served more secondary than elementary students in reading.

Of the 2,254 students in the 1985-86 school year mathematics projects, 2,248 (or 99.7%) were public school students and 6 (or 0.3%) were non-public school students. Of the 2,481 students in the 1986-87 school year mathematics projects, 2,474 (or 99.7%) were public school students and 7 (or 0.3%) were non-public school students. The majority of students in the mathematics projects were elementary students.

More information on Chapter 1 participants in 1985-86 and 1986-87 school years by grade level and public/non-public designation is reported in Appendices 1 through 4. Student enrollments by grade level varied among the seven school districts.

Overall, the Hawaii Chapter 1 reading and mathematics programs serviced 14,158 students in the 1985-86 school year and 14,280 students in the 1986-87 school year.

1.3.3 Project Settings

The following is a list of settings in which Chapter 1 services may be provided. Each setting is described and assigned a code number. The code numbers correspond to those used in Tables 4 and 5.

Code	Definition
1	In-Class Project (Intervention). Chapter 1 funded instructor(s), working within the students' regular classrooms, provides instructional services which meet the Chapter 1 students' special educational needs.
2	Limited Pull-Out Project. (1) The Chapter 1 funded instructor(s) provides instructional services in a setting away from the students' regular classroom (e.g., special resource center). (2) The services provided do not exceed 25% of the instructional time that the students would spend with a particular State funded teacher of required or elective subjects. (This may be computed on a per day, per month, or per year basis.) (3) The project is designed to meet the students' special educational needs.
3	Extended Pull-Out Project. (1) The Chapter 1 funded instructor(s) provides instructional services in a setting away from the students' regular classroom. (2) The services provided exceed 25% of the instructional time that the students would spend with a particular State funded teacher of required or elective subjects. (This may be calculated on a per day, per month, or per year basis.)
4	Replacement Project. In place of a State funded course, the students attend a Chapter 1 funded course. In other words, the Chapter 1 funded instruction totally replaces State funded instruction.
5	Other. This category should be used by any project whose setting was not adequately described by one of the four descriptions above.

TABLE 4

Distribution of Project Setting by District in READING

1985-86[1]

DISTRICT	CODE				
	1	2	3	4	5
Honolulu	0	10	0	4	9
Central	2	12	1	0	1
Leeward	3	8	1	3	0
Windward	10	7	0	2	0
Hawaii	4	13	0	0	0
Maui	2	10	0	0	1
Kauai	1	8	0	1	0
STATE (TOTAL)	22	68	2	10	11

1986-87[1]

DISTRICT	CODE				
	1	2	3	4	5
Honolulu	0	13	0	2	6
Central	2	8	1	4	1
Leeward	6	8	0	2	0
Windward	10	5	0	2	2
Hawaii[2]	0	7	0	0	0
Maui	1	10	0	0	1
Kauai	0	8	0	0	0
STATE (TOTAL)	19	59	1	10	10

[1] Information was obtained from the Project Level Information Form (PLIF) administered to project schools annually.

[2] Not all schools in the Hawaii District reported their project setting.

TABLE 5

Distribution of Project Setting by District in MATHEMATICS

1985-86[1]

DISTRICT	CODE				
	1	2	3	4	5
Leeward	7	0	0	2	0
Windward	11	2	0	1	0
Maui	2	2	0	0	0
STATE (TOTAL)	20	4	0	3	0

1986-87[1]

DISTRICT	CODE				
	1	2	3	4	5
Leeward	8	0	0	0	0
Windward	12	0	0	1	2
Maui	4	8	0	0	0
STATE (TOTAL)	24	8	0	1	2

[1] Information was obtained from the Project Level Information Form (PLIF) administered to project schools annually.

Table 4 shows the distribution of reading projects' settings by districts for school years 1985-86 and 1986-87. Table 5 shows the distribution of mathematics projects' settings by districts for school years 1985-86 and 1986-87. The tables show that:

1. The limited pull-out project setting was the predominant mode for providing reading instruction to students in 1985-86 and 1986-87 school years.

2. The in-class project (intervention) setting was the predominant mode for providing mathematics instruction to students in the 1985-86 and 1986-87 school years.

1.3.4 Project Exposure

Tables 6 and 7 show data on the number of students served, the average days of operation, the average number of student absences, and the average minutes of instruction per week in reading and mathematics, respectively, for 1985-86 and 1986-87 school years. The data indicate that:

a. On the average, the reading projects operated for 154.4 and 147.2 school days in school years 1985-86 and 1986-87, respectively. The mathematics projects operated for 143.0 and 140.7 school days in school years 1985-86 and 1986-87, respectively. Thus, the reading project students were provided more days of Chapter 1 instruction than were mathematics students.

b. On the average, reading project students were absent from the program for 9.6 school days in school year 1985-86 and 11.8 school days in school year 1986-87. The mathematics project students were absent from the program for 8.0 school days in school year 1985-86 and 10.8 school days in school year 1986-87.

c. On the average, the reading project students received 213.2 minutes per week of instruction in 1985-86 school year, and 229.9 minutes per week in 1986-87 school year. The mathematics project students received 216.3 minutes per week of instruction in 1985-86 school year and 211.6 minutes per week in 1986-87 school year. Thus, on the average, Chapter 1 reading project students received more instructional time than the mathematics project students.

TABLE 6

Student Services Summary by School District for READING Projects
1985-86 and 1986-87 School Years[1]

District	Number of Students Served		Average Days of Operation		Average Number of Student Absences[2]		Minutes Instruction Per Week	
	1986	1987	1986	1987	1986	1987	1986	1987
Honolulu	3,525	3,157	144.3	152.5	11.1	13.9	226.0	225.0
Central	1,154	1,440	151.8	140.9	9.2	10.5	187.2	175.0
Leeward	3,165	3,179	150.5	149.1	9.1	12.0	227.8	212.8
Windward	1,639	1,674	156.9	158.5	8.8	10.5	236.0	223.6
Hawaii	1,284	1,377	179.8	140.1	8.4	9.1	231.1	314.6
Maui	773	606	146.0	135.1	8.6	11.7	180.0	195.6
Kauai	364	366	141.1	150.7	11.7	13.4	185.2	221.0
STATE	11,904	11,799	154.4	147.2	9.6	11.8	213.2	229.9

[1] Information was obtained from Project Level Information Form (PLIF) administered to project schools annually.

[2] A student is deemed absent from a Chapter 1 project when he/she does not attend class on a day when project services are available.

TABLE 7

Student Services Summary by School District for MATHEMATICS Projects
1985-86 and 1987-88 School Years[1]

District	Number of Students Served		Average Days of Operation		Average Number of Student Absences[2]		Minutes Instruction Per Week	
	1986	1987	1986	1987	1986	1987	1986	1987
Leeward	1,643	1,083	144.0	151.9	8.0	13.1	225.7	225.4
Windward	488	891	138.3	139.1	8.0	7.1	194.7	197.2
Maui	123	507	159.3	136.3	7.2	12.6	276.9	217.5
STATE	2,254	2,481	143.0	140.7	8.0	10.8	216.3	211.6

[1] Information was obtained from Project Level Information Form (PLIF) administered to project schools annually.

[2] A student is deemed absent from a Chapter 1 project when he/she does not attend class on a day when project services are available.

1.3.5 Staffing

Table 8 shows the number of staff employed in the Chapter 1 program in 1985-86 and 1986-87 school years. The number of teachers employed varied from 166.5 full-time equivalents (FTE) in school year 1985-86 to 152.0 full-time equivalents in school year 1986-87. The number of teacher aides decreased from 58.0 FTE in school year 1985-86 to 55.0 FTE in school year 1986-87. The number of part-time temporary teachers increased substantially from 122.9 FTE in school year 1985-86 to 174.2 FTE in school year 1986-87. Thus, there is a strong trend in using more part-time temporary teachers and less full-time teachers.

1.3.6 Funding

The total amount spent for the Chapter 1 Program in 1985-86 and 1986-87 school years is reported in Table 9. The amount is broken down by district and state administration expenditures. The data show a substantial decrease in the amount spent by state (district totals) and Chapter 1 administration from 1985-86 to 1986-87 school years.

TABLE 8

Number of Staff Employed in Chapter 1 Projects
During the Regular School Term
in 1985-86 and 1986-87[1]

Job Classification[2]	Full-Time Equivalent 1985-86	1986-87
Administrative Staff	2.00	2.00
Teachers	166.50	152.00
Teacher Aides	58.00	55.00
Part-time Temporary Teachers	122.89	174.15
Curriculum Specialists	0	2.00
Clerical Staff	8.00	11.00
Paraprofessional Tutors	66.65	66.65

[1]Information was obtained from State Performance Report (ECIA Chapter 1) 1985-86 and 1986-87 produced by Special Programs Management Section and Evaluation Section.

[2]These job classifications are funded through Chapter 1.

TABLE 9

Chapter 1 Program Expenditures for the 1985-86 and 1986-87 School Years

	Honolulu	Central	Leeward	Windward	Hawaii	Maui	Kauai	State	Total
ECIA Chapter 1									
Expenditures and Encumbrances*									
FY 1986-87	2,593,969	1,155,703	2,821,399	1,352,175	1,082,743	818,476	246,821		10,071,286
FY 1985-86	2,696,761	1,074,179	3,220,005	1,351,582	1,203,381	902,305	302,600		10,750,813
ECIA Chapter 1 Administration									
Expenditures and Encumbrances*									
FY 1986-87								177,797	177,797
FY 1985-86								218,917	218,917

*The expenditures and encumbrances were the total amounts spent by the respective districts and state administration for each school year.

2.0 Description of Evaluation

2.1 General Approach

Hawaii has a single, unified, statewide school system. The state educational system includes seven district offices located in various parts of the state. The Honolulu, Central, Leeward, and Windward district offices are located on the island of Oahu; the Hawaii district office on the island of Hawaii; the Kauai district office on the island of Kauai; and finally the tri-island Maui district office on the island of Maui encompassing the islands of Maui, Lanai, and Molokai.

Each year, the statewide ECIA Chapter 1 Program (formerly ESEA Title I) is evaluated. In the past, the evaluations were conducted by private contractors. Since the 1982-83 school year, the Chapter 1 Program has been evaluated by the Hawaii Department of Education's Evaluation Section.

As in the past, the evaluation followed the guidelines described in the User's Guide: ESEA Title I Evaluation and Reporting System (Mountain View, California: RMC Corporation, 1976). This document was the first manual for Title I evaluation produced for the U.S. Office of Education, and was adopted by the Hawaii Department of Education as of the 1977-78 school year.

The evaluation effort was coordinated by the Evaluation Section in collaboration with Chapter 1 school, district and state personnel. In addition, the Northwest Regional Educational Laboratory's Chapter 1 Technical Assistance Center contributed immeasurably to the evaluation endeavor.

2.2 Evaluation Design

The Hawaii Chapter 1 evaluation system is designed to collect and summarize data on the following topics:

a. student participation,
b. staff participation and training,
c. project exposure, and
d. impact of Chapter 1 on student achievement.

Data on the first three topics are collected annually through the Project Level Information Form (PLIF), which each Chapter 1 project school staff is responsible for completing. (See Appendix 5 for a sample copy.)

The norm-referenced evaluation model -- Model A -- was used to collect data on the impact of the Chapter 1 Program. The evaluation model compares the average score of Chapter 1 students to national norms at two points in time, fall and spring. A test administered in the fall is used to set the expected percentile standing of Chapter 1 students on the posttest. The expected percentile is the average percentile standing of Chapter 1 students at the pretest. Without the Chapter 1 program, the average posttest percentile is expected to equal the pretest percentile. The difference between the observed posttest standing and the expected posttest standing for the group is a measure of Chapter 1 Program impact.

The scores used in reporting Chapter 1 impact results are the Normal Curve Equivalent Scores (or NCEs). NCEs, an equal-interval metric, allow meaningful statistical or mathematical operations. An NCE gain score may be computed by simply finding the difference between an NCE posttest score and NCE pretest score.

Chapter 1 Program impact is measured by the extent to which students demonstrate NCE gains. An average NCE gain score of greater than zero is evidence of positive impact. A zero NCE gain means that the achievement level of the Chapter 1 group has increased from pretest to posttest, but the increase in achievement level would have been expected with regular classroom instruction. Thus, a zero NCE gain suggests that the group has experienced "normal growth" and that there is no extra growth above and beyond expectation.

In 1985-86, using a Fall-to-Spring test cycle, six school districts used the Metropolitan Achievement Test (MAT) and one school district used the California Achievement Test (CAT) to measure program impact. In 1986-87, except for the Hawaii school district, the same test instruments, MAT and CAT, were used by the respective districts to measure program impact.

In 1986-87, the Hawaii school district began a pilot study to examine the implications of using the Stanford Achievement Test (SAT) and using an annual test cycle (Spring-to-Spring/Fall-to-Fall). The pilot study is expected to be completed at the end of the 1987-88 school year. The results of the study will be documented and reported. Thus, the Hawaii school district was excluded from the statewide achievement profile in 1986-87.

3.0 Impact of Chapter 1 on Student Achievement

3.1 Impact on Reading Achievement

Statewide Chapter 1 performance in reading achievement for the 1985-86 and 1986-87 school years is reported in Tables 10 and 11, respectively. Normal curve equivalent (NCE) gains are reported by state, district, and grade level. In addition, Figures 1 and 2 provide a display of the reading gains across grade levels. The statewide reading results are based on districts serving students at different grade levels and utilizing different student selection criteria. Also, as noted, Hawaii school district was excluded from the 1986-87 statewide reading performance summary. Thus, the summaries should be interpreted with these variations in mind. The impact data indicate the following:

a. Mean NCE gains greater than zero were found across all districts and grade levels for the 1985-86 and 1986-87 school years.

b. Elementary school students (grades 1-6) produced greater reading achievement gains than secondary school students (grades 7-12).

c. Statewide mean NCE reading achievement gain scores for the 1985-86 and 1986-87 school years were 8.6 and 8.4, respectively.

Tables 12 and 13 show the distribution of reading achievement gains. They provide the number and percentage of students making NCE gains of greater than zero (+), less than zero (-), and zero (0). The results are displayed by district and across grade levels. Again, the data must be interpreted in terms of the variations in different grade levels serviced by each district, different student selection criteria, as well as the exclusion of Hawaii district. The following points are worth noting:

a. Statewide, 74% and 73% of the students had NCE gain scores of greater than zero in the 1985-86 and 1986-87 school years, respectively. These figures represent the proportion of students on whom the Chapter 1 Program had made a positive impact in reading achievement.

b. A greater proportion of elementary school (1-6) students made positive NCE gains than secondary school (7-12) students for the two-year period.

TABLE 10

STATEWIDE CHAPTER 1 PERFORMANCE IN READING, SY 1985-86

	HONOLULU			CENTRAL			LEEWARD			WINDWARD			HAWAII			MAUI			KAUAI			STATE		
GRADES	N	Post	Mean Gain	N	Post	Mean Gain	N	Post	Mean Gain	N	Post	Mean Gain	N	Post	Mean Gain	N	Post	Mean Gain	N	Post	Mean Gain	N	Post	Mean Gain
1										39	40.8	12.2	166	51.3	19.0							205	49.3	17.7
2				240	35.7	21.0	341	28.8	13.9	200	35.1	6.3	186	37.0	14.5	118	34.1	18.8	70	33.8	14.8	1155	33.5	14.7
3	275	41.2	10.0	180	40.7	14.3	332	31.2	13.4	168	32.1	7.0	175	39.8	13.0	147	39.1	16.7	96	38.4	11.3	1373	37.0	12.2
4	278	36.4	5.3	141	32.7	7.4	314	30.5	8.9	145	32.0	9.2	165	35.5	10.0	131	33.6	8.3	60	34.6	6.5	1234	33.5	8.0
5	258	38.2	6.0	126	34.4	7.8	239	33.4	7.1	131	35.5	5.8	158	37.2	8.6	112	33.5	7.7	60	32.1	8.7	1084	35.4	7.1
6	224	39.9	9.4	63	33.3	9.8	270	34.8	8.8	108	38.1	6.0	77	36.6	12.0	85	36.4	8.6	47	35.7	13.0	874	36.8	9.3
Subtotal	1035	38.9	7.6	750	35.9	13.7	1496	31.5	10.7	791	34.6	7.1	927	39.8	13.0	593	35.6	12.5	333	35.2	10.9	5925	35.7	10.6
7	543	39.4	8.9	116	36.1	3.0	312	34.3	8.7	89	34.1	6.4	90	39.4	7.6	60	37.1	7.1				1210	37.3	7.9
8	505	35.6	5.0	110	34.1	2.1	249	31.6	7.4	101	34.9	5.4	60	40.2	7.7	59	34.1	9.1				1084	34.6	5.6
9	412	33.8	3.9				113	30.2	5.0	87	34.3	4.6										612	33.2	4.2
10	287	30.8	4.3				110	26.4	5.9	143	36.3	5.4										540	31.4	5.0
11	245	28.8	2.0				88	27.4	5.3	99	33.6	1.8										432	29.6	2.6
12							45	23.5	4.0	77	34.0	4.7										122	30.1	4.4
Subtotal	1992	34.7	5.3	226	35.1	2.5	917	30.9	7.0	596	34.7	4.7	150	39.7	7.6	119	35.6	8.1				4000	34.1	5.6
GRAND TOTAL	3027	36.1	6.1	976	35.7	11.1	2413	31.3	9.3	1387	34.6	6.0	1077	39.8	12.3	712	35.6	11.8	333	35.2	10.9	9925	35.1	8.6

"N" indicates the number of students tested, "POST" indicates post-test scores in NCEs, and "MEAN GAIN" indicates mean NCE gain scores.

TABLE 11

STATEWIDE CHAPTER 1 PERFORMANCE IN READING, SY 1986-87

	HONOLULU			CENTRAL			LEEWARD			WINDWARD			MAUI			KAUAI			STATE		
GRADES	N	Post	Mean Gain	N	Post	Mean Gain	N	Post	Mean Gain	N	Post	Mean Gain	N	Post	Mean Gain	N	Post	Mean Gain	N	Post	Mean Gain
1										51	50.1	24.4							51	50.1	24.4
2				233	37.8	21.3	398	31.2	11.8	180	37.7	10.4	108	32.8	20.9	76	30.0	14.0	995	34.0	14.9
3	319	42.4	11.3	220	42.2	14.1	305	31.1	12.1	166	36.9	7.7	91	38.1	13.2	68	32.5	11.4	1169	37.7	11.7
4	303	38.9	6.7	158	37.8	7.7	322	28.5	6.1	137	37.7	8.4	101	34.6	8.9	81	29.9	5.2	1102	34.5	7.0
5	277	37.6	7.4	159	34.4	7.5	233	30.3	5.9	133	35.2	7.2	96	34.1	9.3	48	30.4	5.8	946	34.2	7.1
6	270	41.1	7.1	113	41.0	7.8	217	33.7	8.8	139	38.3	8.4	48	39.3	13.4	48	34.7	9.5	835	38.2	8.3
Subtotal	1169	40.1	8.2	883	38.7	12.8	1475	30.7	9.1	806	38.0	9.5	444	35.3	13.3	321	31.3	9.4	5098	35.8	9.9
7	375	38.2	9.5	150	42.6	5.5	314	35.9	8.5	77	31.0	4.9	39	41.2	6.1				955	37.7	8.1
8	381	37.4	6.4	139	35.0	5.3	238	33.2	3.6	111	32.8	8.7	23	29.9	5.4				892	35.1	5.7
9	360	33.7	3.9				135	28.1	0.7	50	33.9	5.1							545	32.3	3.2
10	246	33.1	6.9				80	28.1	4.4	93	37.4	4.2							419	33.1	5.8
11	119	28.5	4.6				77	23.5	3.4	111	33.8	3.1							307	29.2	3.8
12							46	20.0	2.5	114	34.9	6.7							160	30.6	5.5
Subtotal	1481	35.3	6.6	289	39.0	5.5	890	31.4	4.9	556	34.1	5.6	62	37.0	5.9				3278	34.4	5.9
GRAND TOTAL	2650	37.4	7.3	1172	38.8	11.0	2365	31.0	7.6	1362	36.4	7.9	506	35.5	12.4	321	31.3	9.4	8376	35.3	8.4

"N" indicates the number of students tested; "Post" indicates mean post-test scores in NCEs; and "Mean Gain" indicates mean NCE gain scores.

FIGURE 1

State Reading Gains
SY 1985-86

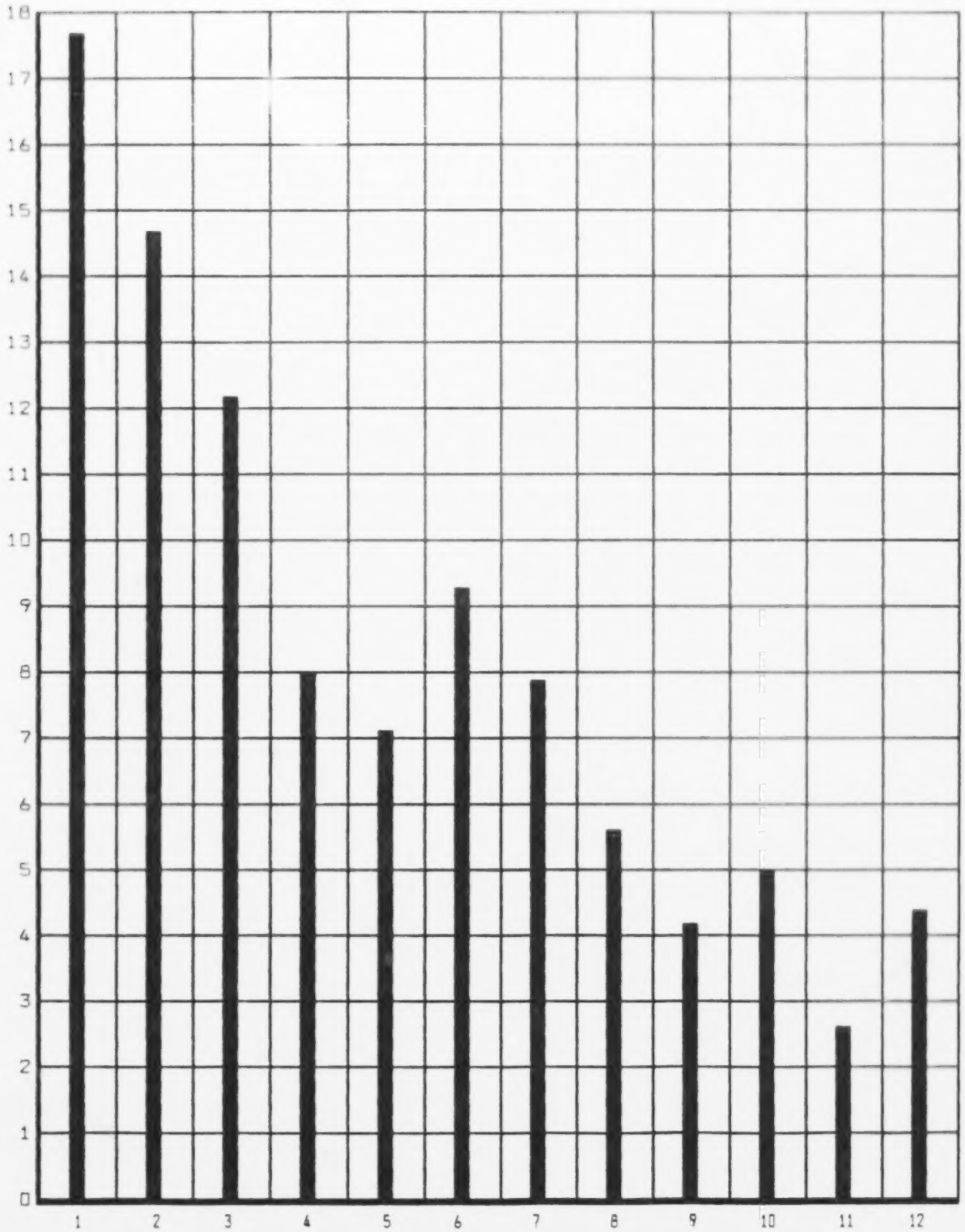

FIGURE 2

State Reading Gains
SY 1986-87

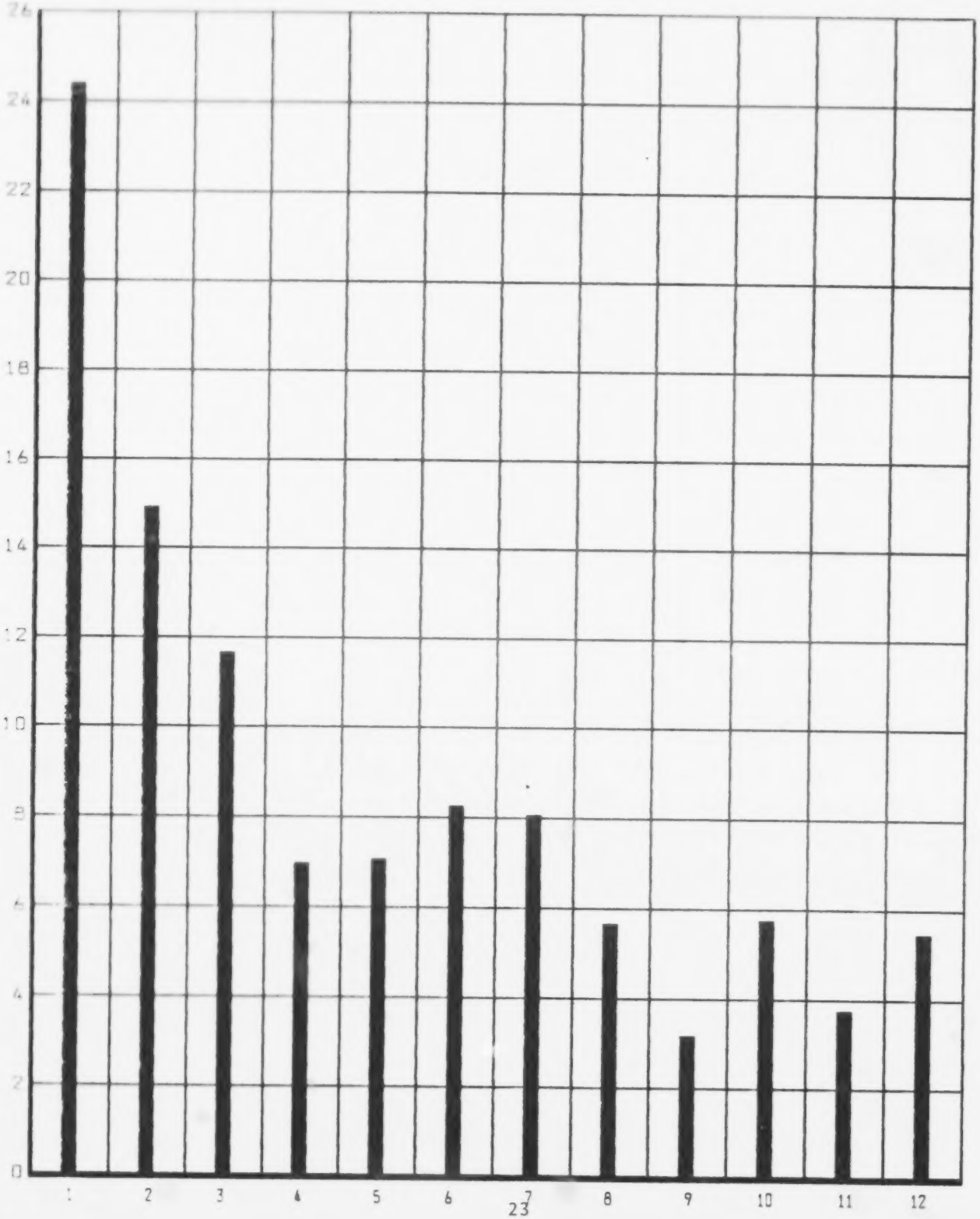

TABLE 12

Chapter 1 READING Performance Gains Distribution, SY 1985-86

GRADE / SCHOOL	1			2			3			4			5			6			TOTAL ELEMENTARY		
	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+
Honolulu							27 10%	13 5%	235 85%	61 22%	21 8%	196 71%	52 20%	15 6%	191 74%	20 9%	6 3%	198 88%	160 15%	55 5%	820 79%
Central				14 6%	22 9%	204 85%	13 7%	3 2%	164 91%	22 16%	10 7%	109 77%	30 24%	6 5%	90 71%	12 19%	0	51 81%	91 12%	41 5%	618 82%
Leeward				46 13%	45 13%	250 73%	34 10%	16 5%	282 85%	60 19%	29 9%	225 72%	43 18%	22 9%	174 73%	51 19%	18 7%	201 74%	234 16%	130 9%	1132 76%
Windward	11 28%	1 3%	27 69%	49 25%	7 4%	144 72%	50 30%	4 2%	114 68%	18 12%	3 2%	124 86%	32 24%	5 4%	94 72%	20 19%	3 3%	85 79%	180 23%	23 3%	588 74%
Hawaii	21 13%	6 4%	139 84%	31 17%	11 6%	144 77%	14 8%	4 2%	157 90%	21 13%	8 5%	136 82%	18 11%	11 7%	129 82%	5 6%	3 4%	69 90%	110 12%	43 5%	774 83%
Maui				14 12%	11 9%	93 79%	5 3%	2 1%	140 95%	23 18%	8 6%	100 76%	27 24%	9 8%	76 68%	12 14%	4 5%	69 81%	81 14%	34 6%	478 81%
Kauai				13 19%	2 3%	55 79%	11 11%	8 8%	77 80%	15 25%	1 2%	44 73%	10 17%	2 3%	48 80	2 4%	1 2%	44 94%	51 15%	14 4%	268 80%
State	32 16%	7 3%	166 81%	167 14%	98 8%	890 77%	154 11%	50 4%	1169 85%	220 18%	80 6%	934 76%	212 20%	70 6%	802 74%	122 14%	35 4%	717 82%	907 15%	340 6%	4678 79%

GRADE / SCHOOL	7			8			9			10			11			12			TOTAL SECONDARY			GRAND TOTAL		
	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+
Honolulu	114 21%	23 4%	406 75%	140 28%	32 6%	333 66%	120 29%	41 10%	251 61%	75 26%	27 9%	185 64%	89 36%	38 16%	118 48%				538 27%	161 8%	1293 65%	698 23%	216 7%	2113 70%
Central	45 19%	5 4%	66 57%	40 36%	10 9%	60 55%													85 38%	15 7%	126 56%	176 18%	56 6%	744 76%
Leeward	50 16%	26 8%	236 76%	61 24%	20 8%	168 67%	30 27%	12 11%	71 63%	30 27%	9 8%	71 65%	19 22%	13 15%	56 64%	11 24%	6 13%	28 62%	201 22%	86 9%	630 69%	435 18%	216 9%	1762 73%
Windward	22 25%	3 3%	64 72%	24 24%	5 5%	72 71%	24 28%	3 3%	60 69%	37 26%	6 4%	100 70%	41 41%	7 7%	51 52%	14 18%	3 4%	60 78%	162 27%	27 5%	407 68%	342 25%	50 4%	995 72%
Hawaii	9 10%	1 1%	80 89%	9 15%	2 3%	49 81%													18 12%	3 2%	129 86%	128 12%	46 4%	903 84%
Maui	7 12%	6 10%	47 78%	9 15%	2 3%	48 81%													16 13%	8 7%	95 80%	97 14%	42 6%	573 80%
Kauai																						51 15%	14 4%	268 80%
State	247 20%	64 5%	899 74%	283 26%	71 7%	730 67%	174 28%	56 9%	382 62%	142 26%	42 8%	356 66%	149 34%	58 13%	225 52%	25 20%	9 7%	88 72%	1020 26%	300 8%	2680 67%	1927 19%	640 6%	7358 74%

TABLE 13

Chapter 1 READING Performance Gains Distribution, SY 1986-87

GRADE	1			2			3			4			5			6			Elem Total		
SCHOOL	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+
Honolulu							23 (7)	13 (4)	283 (89)	58 (19)	10 (3)	235 (78)	41 (15)	19 (7)	217 (78)	31 (11)	14 (5)	225 (83)	153 (13)	56 (5)	960 (82)
Central				19 (8)	14 (6)	200 (86)	10 (5)	11 (5)	199 (90)	38 (24)	11 (7)	109 (69)	38 (24)	7 (4)	114 (72)	20 (18)	3 (3)	90 (80)	125 (14)	46 (5)	712 (81)
Leeward				86 (22)	28 (7)	284 (71)	40 (13)	20 (7)	245 (80)	80 (25)	23 (7)	219 (68)	52 (22)	21 (9)	160 (69)	39 (18)	12 (6)	166 (76)	297 (20)	104 (7)	1074 (73)
Windward	6 (12)		45 (88)	35 (19)	4 (2)	141 (78)	52 (31)	5 (3)	109 (66)	35 (26)	4 (3)	98 (72)	39 (29)	5 (4)	89 (67)	36 (26)	1 (1)	102 (73)	203 (25)	19 (2)	584 (72)
Maui				6 (6)	9 (8)	93 (86)	5 (5)	3 (3)	83 (91)	17 (17)	3 (3)	81 (80)	13 (14)	5 (5)	78 (81)	4 (8)	2 (4)	42 (88)	45 (10)	22 (5)	377 (85)
Kauai				17 (22)	6 (8)	53 (70)	10 (15)	5 (7)	53 (78)	15 (19)	11 (14)	55 (68)	14 (29)	2 (4)	32 (67)	7 (15)	1 (2)	40 (83)	63 (20)	25 (8)	233 (73)
STATE	6 (12)		45 (88)	163 (16)	61 (6)	771 (77)	140 (12)	57 (5)	972 (83)	243 (22)	62 (6)	797 (72)	197 (21)	59 (6)	690 (73)	137 (16)	33 (4)	665 (80)	886 (17)	272 (5)	3940 (77)

GRADE	7			8			9			10			11			12			Secondary Total			District Total		
SCHOOL	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+
Honolulu	86 (23)	17 (5)	272 (73)	92 (24)	23 (6)	266 (70)	104 (29)	36 (10)	220 (61)	62 (25)	12 (5)	172 (70)	34 (29)	10 (8)	75 (63)				378 (26)	98 (7)	1005 (68)	531 (20)	154 (6)	1965 (74)
Central	31 (21)	13 (9)	106 (71)	32 (23)	13 (9)	94 (68)													63 (22)	26 (9)	200 (69)	188 (16)	72 (6)	912 (78)
Leeward	61 (19)	11 (4)	242 (77)	63 (26)	14 (6)	161 (68)	59 (44)	13 (10)	63 (47)	21 (26)	8 (10)	51 (64)	26 (34)	7 (9)	44 (57)	13 (28)	11 (24)	22 (48)	243 (27)	64 (7)	583 (66)	540 (23)	168 (7)	1657 (70)
Windward	25 (32)		52 (68)	25 (23)	2 (2)	84 (76)	17 (34)		33 (66)	30 (32)	4 (4)	59 (63)	44 (40)	4 (4)	63 (57)	29 (25)	3 (3)	82 (72)	170 (31)	13 (2)	373 (67)	373 (27)	32 (2)	957 (70)
Maui	5 (13)	2 (5)	32 (82)	5 (22)	1 (4)	17 (74)													10 (16)	3 (5)	49 (79)	55 (11)	25 (5)	426 (84)
Kauai																						63 (20)	25 (8)	233 (73)
STATE	208 (22)	43 (5)	704 (74)	217 (24)	53 (6)	622 (70)	180 (33)	49 (9)	316 (58)	113 (27)	24 (6)	282 (67)	104 (34)	21 (7)	182 (59)	42 (26)	14 (9)	104 (65)	864 (26)	204 (6)	2210 (67)	1750 (21)	476 (6)	6150 (73)

3.2 Impact on Achievement in Mathematics

Chapter 1 performance in mathematics is reported in Tables 14 and 15 for the 1985-86 and 1986-87 school years, respectively. These tables show NCE gain scores by state, district, and grade level. Figures 3 and 4 display mean gain results across grade levels. The data indicate the following:

a. Mean NCE gains greater than zero were found across all grade levels for each of the two school years.

b. Statewide, the mean NCE gains were 8.2 in 1985-86 and 10.6 in 1986-87. In addition, elementary students produced greater achievement gains than secondary students based on the two-year performance.

Tables 16 and 17 present the distribution of the mathematics gains. They show the number and percentage of students with NCE gains of greater than, less than, or equal to zero. The results are reported by state, district, and by grade. Only three districts had Chapter 1 mathematics programs. The folowing points are worth noting:

a. For the 1985-86 and 1986-87 school years, 71% and 79% of the students in Chapter 1 mathematics had NCE gains greater than zero, respectively.

b. Except for Windward school district, a greater proportion of elementary school (2-6) students made positive NCE gains than secondary school (7-12) students for the two-year period.

3.3 Conclusions

The evaluation findings suggest that Hawaii's Chapter 1 Program has had a positive impact on students. More specifically, the data show:

1. The reading achievement gains were well above normal growth in all the different grade levels for the 1985-86 and 1986-87 school years. The majority of project students in reading made NCE gain scores greater than zero in both years.

2. The mathematics achievement gains were well above normal growth in the majority of grade levels for the 1985-86 and 1986-87 school years. The majority of students in mathematics made gain scores greater than zero both years.

TABLE 14

STATEWIDE CHAPTER 1 PERFORMANCE IN MATHEMATICS, SY 1985-86

	LEEWARD			WINDWARD			MAUI			STATE		
GRADES	N	POST	MEAN GAIN	N	POST	MEAN GAIN	N	POST	MEAN GAIN	N	POST	MEAN GAIN
2	192	38.9	16.6	103	32.4	3.0	19	41.5	11.4	314	36.9	11.8
3	211	34.8	12.7	92	34.7	-0.2	25	42.5	14.4	328	35.4	9.3
4	230	33.3	9.4	55	34.5	9.7	19	30.5	0.1	304	33.3	8.8
5	168	30.8	7.6	53	29.9	6.7	16	41.6	4.9	237	31.3	7.2
6	159	35.5	8.9	60	37.3	7.6	17	37.9	4.4	236	36.1	8.2
Subtotal	960	34.7	11.2	363	33.7	4.5	96	39.0	7.7	1419	34.7	9.2
7	146	30.7	4.4	28	39.6	6.6	20	28.2	-2.6	194	31.7	4.0
8	122	32.6	5.4	50	38.4	7.0	12	19.3	5.9	184	33.3	5.9
9	34	32.8	5.5							34	32.8	5.5
10	23	27.7	3.3							23	27.7	3.3
11	6	27.8	9.7							6	27.8	9.7
12	3	30.1	6.8							3	30.1	6.8
Subtotal	334	31.3	4.9	78	38.8	6.8	32	24.9	0.6	444	32.2	5.0
GRAND TOTAL	1294	33.8	9.6	441	34.6	4.9	128	35.5	5.9	1863	34.1	8.2

"N" indicates the number of students tested; "POST" indicates post-test scores in NCEs; and "MEAN GAIN" indicates mean NCE gain scores.

TABLE 15

STATEWIDE CHAPTER 1 PERFORMANCE IN MATHEMATICS, SY 1986-87

	LEEWARD			WINDWARD			MAUI			STATE		
GRADES	N	POST	MEAN GAIN	N	POST	MEAN GAIN	N	POST	MEAN GAIN	N	POST	MEAN GAIN
2	295	45.5	18.2	17	39.3	9.3	96	49.1	20.8	408	46.1	18.5
3	224	41.1	16.7	33	33.2	-0.9	104	44.0	14.8	361	41.2	14.5
4	240	33.5	8.5	193	39.6	5.0	70	35.7	7.1	503	36.1	6.9
5				181	39.4	5.3	85	42.4	13.5	266	40.4	8.0
6				189	44.2	6.7	32	40.5	12.3	221	43.7	7.5
Subtotal	759	40.4	14.7	613	40.6	5.5	387	43.1	14.4	1759	41.1	11.5
7				66	41.1	3.3	27	29.4	-0.6	93	37.7	2.2
8				121	39.8	6.9	25	33.5	4.5	146	38.7	6.5
Subtotal				187	40.3	5.7	52	31.4	1.9	239	38.4	4.9
GRAND TOTAL	759	40.4	14.7	800	40.5	5.5	439	41.7	12.9	1998	40.7	10.6

"N" indicates the number of students tested; "POST" indicates mean post-test scores in NCEs; and "MEAN GAIN" indicates mean NCE gain scores.

FIGURE 3

State Math Gains
SY 1985-86

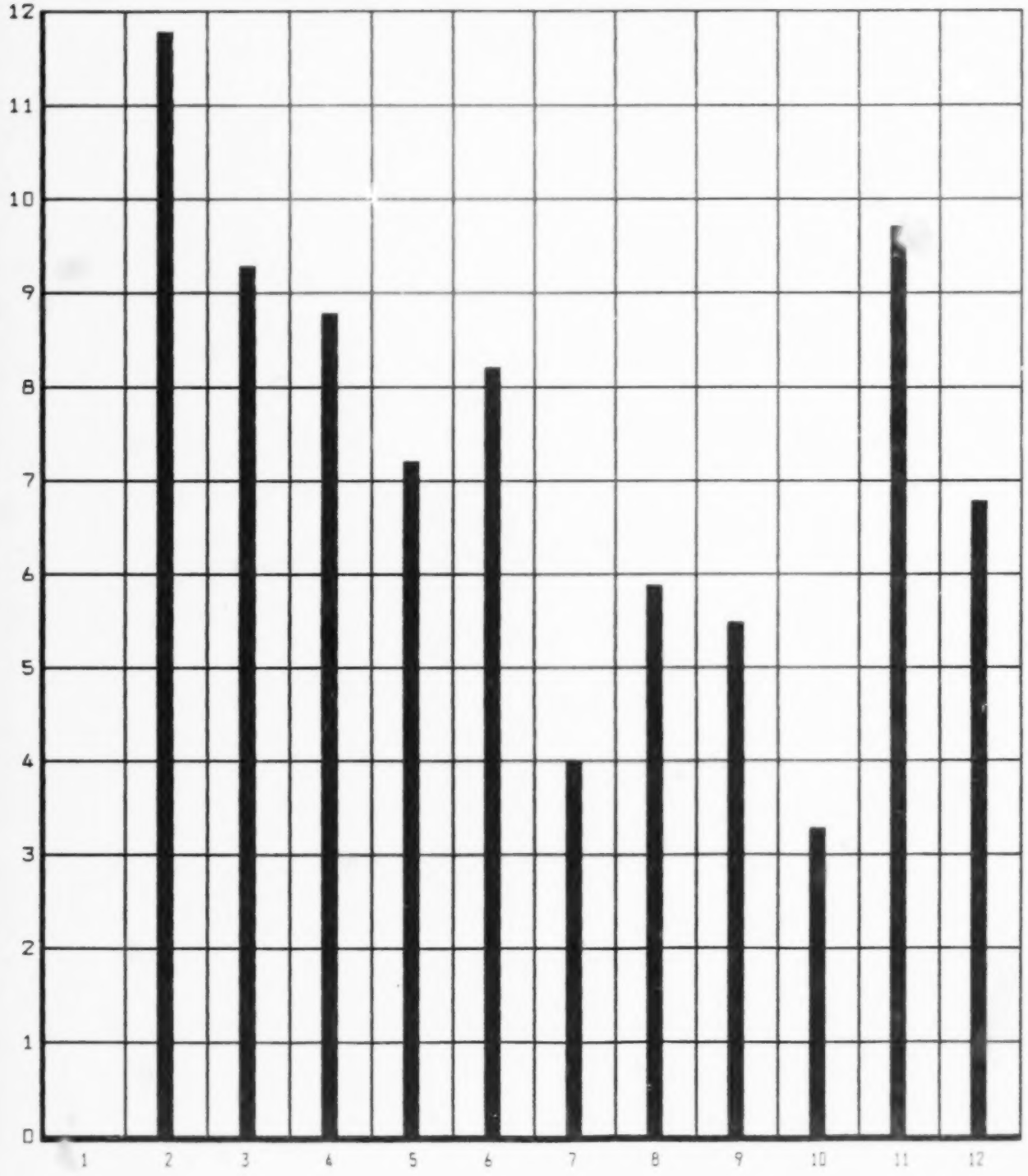

FIGURE 4

State Math Gains
SY 1986-87

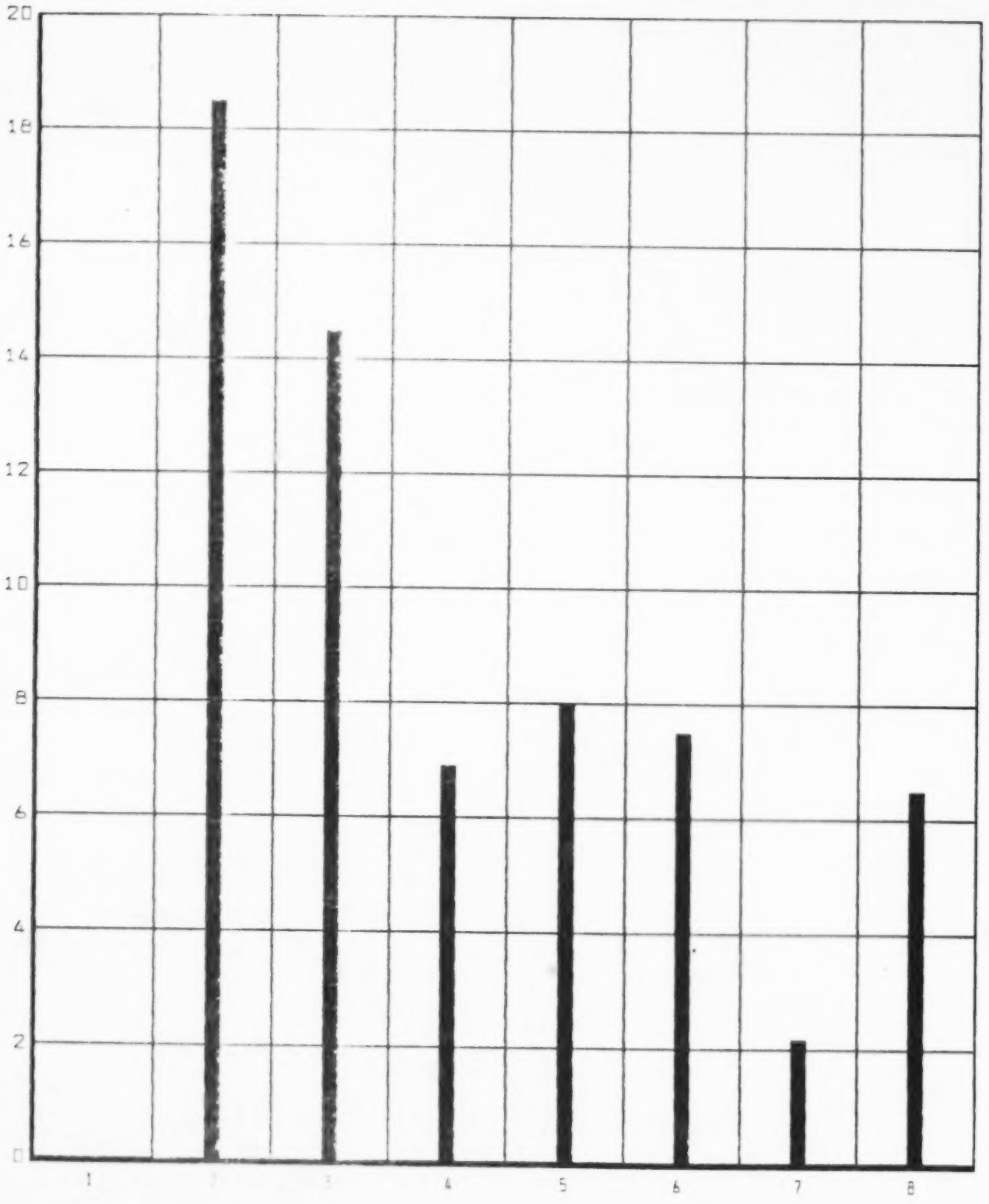

TABLE 16

Chapter 1 MATHEMATICS Performance Gains Distribution, SY 1985-86

GRADE	1			2			3			4			5			6			TOTAL ELEMENTARY		
SCHOOL	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+
Leeward				21 11%	7 4%	164 85%	28 13%	8 4%	175 83%	46 20%	11 5%	173 75%	29 17%	19 11%	120 71%	33 21%	10 6%	116 73%	157 16%	55 6%	748 78%
Windward				41 40%	6 6%	56 54%	48 52%	2 2%	42 46%	7 13%	1 2%	47 85%	11 21%	1 2%	41 77%	13 22%	3 5%	44 73%	120 33%	13 4%	230 63%
Maui				2 11%		17 89%	2 8%	1 4%	22 88%	10 53%		9 47%	4 25%	1 6%	11 69%	4 24%		13 76%	22 23%	2 2%	72 75%
State				64 20%	13 4%	237 75%	78 24%	11 3%	239 73%	63 21%	12 4%	229 75%	44 19%	21 9%	172 73%	50 21%	13 6%	173 73%	299 21%	70 5%	1050 74%

GRADE	7			8			9			10			11			12			TOTAL SECONDARY			GRAND TOTAL		
SCHOOL	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+
Leeward	57 39%	4 3%	85 58%	38 31%	10 8%	74 61%	12 35%	1 3%	21 62%	8 35%	2 9%	13 57%	1 17%	2 33%	3 50%	1 33%		2 67%	117 35%	19 6%	198 59%	274 21%	74 6%	946 73%
Windward	5 18%	1 4%	22 79%	9 18%	2 4%	39 78%													14 18%	3 4%	61 78%	134 30%	16 4%	291 66%
Maui	13 65%	1 5%	6 30%	2 17%		10 83%													15 47%	1 3%	16 50%	37 29%	3 2%	88 69%
State	75 39%	6 3%	113 58%	49 27%	12 7%	123 67%	12 35%	1 3%	21 62%	8 35%	2 9%	13 57%	1 17%	2 33%	3 50%	1 33%		2 67%	146 33%	23 5%	275 62%	445 24%	93 5%	1325 71%

TABLE 17

Chapter 1 MATHEMATICS Performance Gains Distribution, SY 1986-87

GRADE	2			3			4			5			6			Elem Total		
SCHOOL	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+	-	0	+
Leeward	27 (9)	11 (4)	257 (87)	14 (6)	8 (4)	202 (90)	48 (20)	19 (8)	173 (72)							89 (12)	38 (5)	632 (83)
Windward	4 (24)		13 (76)	20 (61)	1 (3)	12 (36)	55 (28)	10 (5)	128 (66)	46 (25)	7 (4)	128 (71)	42 (22)	4 (2)	143 (76)	167 (27)	22 (4)	424 (69)
Maui	4 (4)		92 (96)	2 (2)	1 (1)	101 (97)	8 (11)	5 (7)	57 (81)	5 (6)	3 (4)	77 (91)	2 (6)		30 (94)	21 (5)	9 (2)	357 (92)
STATE	35 (9)	11 (3)	362 (89)	36 (10)	10 (3)	315 (87)	111 (22)	34 (7)	358 (71)	51 (19)	10 (4)	205 (77)	44 (20)	4 (2)	173 (78)	277 (16)	69 (4)	1413 (80)

GRADE	7			8			Secondary Total			District Total		
SCHOOL	-	0	+	-	0	+	-	0	+	-	0	+
Leeward										89 (12)	38 (5)	632 (83)
Windward	23 (35)	2 (3)	41 (62)	20 (17)	4 (3)	97 (80)	43 (23)	6 (3)	138 (74)	210 (26)	28 (4)	562 (70)
Maui	11 (41)	5 (19)	11 (41)	6 (24)	1 (4)	18 (72)	17 (33)	6 (12)	29 (56)	38 (9)	15 (3)	386 (88)
STATE	34 (37)	7 (8)	52 (56)	26 (18)	5 (3)	115 (79)	60 (25)	12 (5)	167 (70)	337 (17)	81 (4)	1580 (79)

4.0 Program Improvement Effort

4.1 The Chapter 1 Evaluation Technical Assistance Center (TAC) of the Northwest Regional Educational Laboratory (NWREL) has helped Hawaii's Chapter 1 Program immeasurably in its program improvement efforts through workshops and consultations. More specifically, workshop topics presented to Chapter 1 teachers, district and state staff in 1985-86 and 1986-87 school years include:

1. Student Selection
2. Improving Your Diagnostic and Planning System Through the Use of Evaluation Data
3. Evaluating Program Implementation
4. Time-On-Task
5. Using Microcomputers for Chapter 1 Evaluation
6. Evaluating Non-Traditional Programs
7. Evaluation of Local School Systems
8. Interpreting Chapter 1 Project Gains
9. Sustained Effects
10. Reporting Test Results
11. Displaying Evaluation Data
12. Functional Level Testing
13. Test Taking Skills
14. Test Interpretation for Program Improvement (Curriculum Mapping)
15. Cost Analysis Methods
16. Sampling
17. Onward-to-Excellence: A Program Improvement Strategy (Chapter 1 Improvement Program - CHIP)

In addition to workshops, TAC provided numerous on-site and telephone consultations to solve specific problems. Also, on request, TAC has developed workshops specifically tailored to meet needs in instructional improvement. "Test Interpretation for Program Improvement" is an example of such tailoring efforts.

4.2 Chapter 1 state and district staff have emphasized program improvement efforts throughout the 1985-86 and 1986-87 school years. Each district has made commendable program strides in improving the quality of projects. Four districts -- Honolulu, Central, Windward, and Kauai -- submitted projects, which they deemed to be unusually effective, to the State Superintendent for nomination under the Secretary's Initiative to Improve the Education of Disadvantaged Children. These four were nominated and cited by the United States Office of Education Secretary's Initiative Program as unusually successful Chapter 1 projects.[1]

The four projects are as follows:[2]

1. Project READ, Aiea Elementary School, Central Oahu District

   READ is to improve the basic skills of disadvantaged students in reading and language arts. Objectives are developed jointly by the Chapter 1 project staff and regular classroom teachers after analyses of student test results, classroom performance, parent surveys, teacher observations and teacher/counselor recommendations. Each Chapter 1 student has a personal Individual Instructional Plan. The project served 119 students in grades 2-6 (1986-87 school year). For more information, contact Mr. Frank Jordan, District Educational Specialist, Hawaii Department of Education, Central Oahu District, 2035 California Avenue, Room C-7, Wahiawa, Hawaii 96786. Phone: (808) 621-6000.

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[1]The Secretary's Initiative goal is to enhance program improvement effort through identifying and sharing unusually successful Chapter 1 projects in compensatory education settings.

[2]Information about the four projects nominated under the Initiative was obtained from the Planning and Evaluation Branch, Special Programs Management Section: Project READ, Aiea Elementary School, Aiea, Hawaii, Central Oahu District; Kailua Elementary School, Kailua, Hawaii, Windward Oahu District; Kapaa Elementary School, Kapaa, Kauai, Kauai District; Comprehensive Language Improvement Project, Kalakaua Intermediate School, Honolulu, Hawaii, Honolulu District.

2. Reading, Kailua Elementary School, Windward Oahu District

Project Reading is to improve the basic skills of disadvantaged students in reading, writing, speaking, and listening. Goals are jointly developed by the Chapter 1 project staff and regular classroom teachers after analyses of student test results, classroom performance, teacher observations and teacher/counselor recommendations. Each Chapter 1 student has a personal Pupil Educational Plan. Lesson plans for individual students are adjusted daily. The project uses parents as an integral part of the program through RAH (Reading At Home). The project served 141 public and 5 non-public school students in grades 1-6 (1986-87 school year). For more information, contact Mrs. Frances Shimotsu, District Educational Specialist, Hawaii Department of Education, Windward District Office, 46-169 Kamehameha Highway, Kaneohe, Hawaii 96744. Phone: (808) 247-5631.

3. Kapaa Elementary School Chapter 1 Reading Project, Kapaa Elementary School, Kauai School District

Reading project is to improve students' reading and writing skills. A unique component of this project is the PAC (Parent and Child) Family Program. The program calls for parents and their students to work at home on teacher-suggested activities. The PAC Family Program helps extend learning activities beyond the classroom, encourage parent participation, and develop positive attitudes toward learning. The project served 110 public and 25 non-public school students in grades 2-6 (1986-87 school year). For more information, contact Chapter 1 District Coordinator, Kauai District Office, 3060 Eiwa Street, Lihue, Hawaii 96766. Phone: (808) 245-4366.

4. Comprehensive Language Improvement Project (CLIP), Kalakaua Intermediate School, Honolulu District

Kalakaua's CLIP is to raise the reading achievement level of Chapter 1 students. CLIP has five major components integrated into a

comprehensive program. The components are as follows:

a. Language Improvement Centers
b. Curriculum and Instruction
c. In-service
d. Parent Involvement
e. Monitoring and Evaluation (Quality Monitoring)

The Kalakaua CLIP is implemented and monitored by a highly trained staff. The project served 401 students in grades 7-9. For more information, contact Dr. Donald Enoki, District Educational Specialist, Honolulu District Office, 4967 Kilauea Avenue, Honolulu, Hawaii 96816. Phone: (808) 734-1985.

Other program improvement efforts are as follows:

1. School projects throughout the state have set higher student performance expectations. It is now common to find that projects expect mean gain scores of at least five NCEs, rather than just greater than zero.[3]

2. Teachers and principals have worked together in developing Chapter 1 school-determined action plans. The development of the action plans entails work sessions where evaluation data are interpreted jointly by administrators and staff to generate objectives, strategies and activities to improve the Chapter 1 project the following year.[4] These work sessions were facilitated by NWREL-TAC via workshops and the Chapter 1 Improvement Program (CHIP). A similar improvement effort results from the Quality Monitoring procedure used in Honolulu District.

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[3]Information obtained from Project applications for 1987-88, Special Programs Management Section.

[4]Ibid.

3. A Chapter 1 routine evaluation was conducted by the Maui District personnel. The routine evaluation is a program evaluation designed to address systematically key questions about the program and its performance. The evaluation is conducted in the context of program improvement. The Maui District was the first to complete such an evaluation within the guidelines of Routine Evaluation Implementation Plan, Office of the Superintendent, Planning and Evaluation Branch, Evaluation Section, April 1986 (Revised).

5.0 Recommendations*

5.1 Have Chapter 1 staff (statewide) establish an objective to mainstream students with specific criteria and standards for mainstreaming.

5.2 In line with the concept of multiple objectives, commit the Hawaii Chapter 1 Program to do better than national Chapter 1 performance.

5.3 The evaluation of the Chapter 1 Program should be improved. The evaluation can be improved by determining how former Chapter 1 students are performing in the "mainstream." Data collection procedures on mainstreamed students should be established so that data can be routinely collected.

* Some of the recommendations are based on field notes and observations not presented in this report.

APPENDIX 1

Number of Students Enrolled in Chapter 1 Reading Projects
by Grade Level and Public/Non-Public Designation
1985-86

DISTRICT	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL	GRAND TOTAL
Honolulu														
Public			342	320	303	267	601	553	495	305	324		3,510	3,525
Non-Public			1	2		2	3	3	4				15	
Central														
Public		299	201	174	144	73	122	131					1,144	1,154
Non-Public				2	3	2	3						10	
Leeward														
Public		449	447	393	292	322	389	326	180	172	137	58	3,165	3,165
Non-Public													0	
Windward														
Public	57	193	197	146	152	124	135	94	124	172	138	101	1,633	1,639
Non-Public	1	1	3			1							6	
Hawaii														
Public	200	220	218	191	180	89	106	80					1,284	1,284
Non-Public													0	
Maui														
Public		129	155	137	124	93	70	65					773	773
Non-Public													0	
Kauai														
Public		75	100	64	64	50							353	364
Non-Public		3	4	3		1							11	
TOTAL														
Public	257	1,365	1,660	1,425	1,259	1,018	1,423	1,249	799	649	599	159	11,862	
Non-Public	1	4	8	7	3	6	6	3	4				42	
GRAND TOTAL	258	1,369	1,668	1,432	1,262	1,024	1,429	1,252	803	649	599	159		11,904

APPENDIX 2

Number of Students Enrolled in Chapter 1 Mathematics Projects
by Grade Level and Public/Non-Public Designation
1985-86

DISTRICT	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL	GRAND TOTAL
Leeward														
Public		234	293	298	214	195	168	151	47	29	10	4	1,643	
Non-Public													0	1,643
Windward														
Public	2	94	92	63	72	70	30	59					482	
Non-Public	1	1	3			1							6	488
Maui														
Public		19	25	3	6	10	39	21					123	
Non-Public													0	123
TOTAL														
Public	2	347	410	364	292	275	237	231	47	29	10	4	2,248	
Non-Public	1	1	3			1							6	2,254
GRAND TOTAL	3	348	413	364	292	276	237	231	47	29	10	4		2,254

APPENDIX 3

Number of Students Enrolled in Chapter 1 Reading Projects
by Grade Level and Public/Non-Public Designation
1986-87

District	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL	GRAND TOTAL
Honolulu														
Public			391	351	342	316	434	440	419	313	144		3,150	
Non-Public			1	1	2		2	1					7	3,157
Central														
Public		291	282	187	187	140	186	167					1,440	
Non-Public													0	1,440
Leeward														
Public		545	414	408	306	278	383	325	199	121	110	90	3,179	
Non-Public													0	3,179
Windward														
Public	76	213	188	158	156	153	91	122	74	130	148	150	1,659	
Non-Public		4	4	1	3	2	1						15	1,674
Hawaii														
Public	169	210	231	236	204	99	96	104					1,349	
Non-Public	5	5	6	5	4	3							28	1,377
Maui														
Public		128	114	123	113	58	46	24					606	
Non-Public													0	606
Kauai														
Public		85	79	84	57	50							355	
Non-Public		3	1	4	2	1							11	366
TOTAL														
Public	245	1,472	1,699	1,547	1,365	1,094	1,236	1,182	692	564	402	240	11,738	
Non-Public	5	12	12	11	11	6	3	1					61	
GRAND TOTAL	250	1,484	1,711	1,558	1,376	1,100	1,239	1,183	692	564	402	240	11,799	11,799

APPENDIX 4

Number of Students Enrolled in Chapter 1 Mathematics Projects
by Grade Level and Public/Non-Public Designation
1986-87

District	1	2	3	4	5	6	7	8	9	10	11	12	TOTAL	GRAND TOTAL
Leeward														
Public		412	328	343									1,083	1,083
Non-Public													0	
Windward														
Public		20	36	216	195	198	82	137					884	891
Non-Public				1	4	2							7	
Maui														
Public		109	122	84	99	38	29	26					507	507
Non-Public													0	
TOTAL														
Public		541	486	643	294	236	111	163					2,474	2,481
Non-Public				1	4	2							7	
GRAND TOTAL		541	486	644	298	238	111	163					2,481	2,481

CHAPTER 1
PROJECT LEVEL INFORMATION FORM
SCHOOL YEAR 1986-87

INSTRUCTIONS: Please complete the following form. If you have any questions, please call the District Office. A separate form must be filled out for each project (defined by an implementation model, a discipline -- mathematics or reading -- and a public or non-public school). The completed forms are due to the District Office on _____. The district is to submit completed forms to the Evaluation Section by June 1, 1987 .

Project Description

1. This form covers Chapter 1 activities at

   a. School: _____

   b. District: _____

2. This report covers Chapter 1 activities in (circle one only)

   Reading 1

   Mathematics 2

3. This report covers Chapter 1 services delivered under one and only one of the following project settings. Please CIRCLE the code that corresponds most closely to the type of setting in which the project took place.

CODE	DEFINITION
1	In-Class Project (Intervention). Chapter 1 funded instructor(s), working within the students' regular classrooms, provides instructional services which meet the Chapter 1 students' special educational needs.
2	Limited Pull-Out Project. (1) The Chapter 1 funded instructor(s) provides instructional services in a setting away from the student's regular classroom (e.g., special resource center). (2) The services provided do not exceed 25% of the instructional time that the students would spend with a particular State funded teacher of required or elective subjects. (This may be computed on a per day, per month, or per year basis.) (3) The project is designed to meet the student's special educational needs.
3	Extended Pull-Out Project. (1) The Chapter 1 funded instructor(s) provides instructional services in a setting away from the student's regular classroom. (2) The services provided exceed 25% of the instructional time that the students would spend with a particular State funded teacher of required or elective subjects. (This may be calculated on a per day, per month or per year basis.)
4	Replacement Project. In place of a State funded course, the students attend a Chapter 1 funded course. In other words, the Chapter 1 funded instruction totally replaces State funded instruction.
5	Other. This category should be used by any project whose setting was not adequately described by one of the four descriptions above. (Please describe.)

4. Student Information

a. Student Ethnicity

For each ethnic group listed below, indicate the number of students who ever received program services in 1986-87. (NOTE: Be sure that the total equals the total number of students served on page 6, column 2.)

(1) American Indian or Alaskan Native ..... ____

(2) Black, not Hispanic ..... ____

(3) Hispanic (includes Portuguese) ..... ____

(4) White, not Hispanic ..... ____

(5) Asian or Pacific Islander ..... ____

(a) Chinese ..... ____

(b) Filipino ..... ____

(c) Hawaiian ..... ____

(d) Part-Hawaiian ..... ____

(e) Japanese ..... ____

(f) Korean ..... ____

(g) Samoan ..... ____

(h) Indo-Chinese ..... ____
(Cambodian, Vietnamese, Laotian, Thai)

(i) Other (Specify)

_____ ____

_____ ____

_____ ____

(6) Other (Specify):

_____ ..... ____

_____ ..... ____

_____ ..... ____

TOTAL STUDENTS SERVED ..... ____
(Same total as on page 6, column 2)

Project Service Dates

5. Date project began providing direct services to students:

_____ .

6. Last day of services to students in 1986-87 (anticipated):

_____

NOTE: "Project Services" begin on the first day you have Chapter 1 students in the classroom. They include diagnostic testing or orientation activities, but do not include planning or organizational activities which were done before the students actually came to the classroom.

Instructions for Project Exposure Matrix

Column (1)

Enter the grade level of students receiving program services in the project during school year 1986-87. Begin with the lowest grade and proceed to the highest.

Column (2)

Enter the total number of students, by sex, at each grade level who ever received program services in the project during school year 1986-87. A simple way to calculate this is to take the number you started with and add the number who entered the program during the year. DO NOT SUBTRACT THOSE WHO LEFT THE PROGRAM DURING THE YEAR.

Column (3)

Enter the number of school days during which the Chapter 1 project served students this year. Subtract any days the project did not provide services such as days before students were selected, and days between the end of the Chapter 1 program and the last day of school.

Column (4)

Enter the total number of days Chapter 1 students from each grade level were absent. A student is absent from a Chapter 1 project when he/she does not attend class on a day when project services are available to that student.

Column (5)

Enter the number of minutes of scheduled instruction per week for each grade level. If there are differences within a grade level, calculate the average number of minutes of instruction like this: (1) for each class, multiply the number of students served by the number of minutes of instruction per week; (2) sum those products; and (3) divide the sum by the total number of students in the grade level.

Page 7 (Matrix)

Provide the number of Chapter 1 participants by grade and year of birth. Be sure that the total equals the totals on pages 3 and 6 relative to TOTAL STUDENTS SERVED.

PROJECT EXPOSURE DATA

Grade Level	Total Students Served		Days of Operation	Total Student Absences	Minutes of Instruction Per Week
	Male	Female			
Subtotal					
TOTAL					

PROJECT EXPOSURE DATA (continued)

GRADE	YEAR OF BIRTH																	TOTAL
	1982	1981	1980	1979	1978	1977	1976	1975	1974	1973	1972	1971	1970	1969	1968	1967	1966	
PRE-K																		
K																		
1																		
2																		
3																		
4																		
5																		
6																		
7																		
8																		
9																		
10																		
11																		
12																		
TOTAL																		